

Quantitative Study on Pricing Strategy of Asian grocery stores in Dublin and their effects on Customer Segmentation due to increase in demand.



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ABSTRACT

PURPOSE – The research aim is to study the pricing strategies used in Asian grocery stores in Dublin and their effects on customer segment based on the demand for products.

ORIGINALITY/VALUE

There is significant importance to prices in the retail industry, as the demand from consumers increases then prices for products are also altered or increase in order to increase sale.

Customer satisfaction is also main concern for grocery stores; thus, there has been earlier literature based on this research work. Similar work is being carried out by earlier literature on supermarkets and convenience stores, but there is no research-based on Asian grocery stores in Dublin. Focusing on the particular customer segment, main aim of the research is to study the pricing strategies used in Asian grocery stores and, also to study its effects on customer segment. In a context of increasing demand for Asian products, cost is also analyzed in different Asian grocery stores to specify the standard varying cost used by these stores on weekly basis.

DESIGN/METHODOLOGY/APPROACH

The study is based on data collected through surveys done by structured questionnaire; samples were the responses collected from the customers that shop in Asian grocery stores once in a week. Secondly for analysis of varying cost, weekly data of prices were collected from Asian grocery stores on five products that were in demand. These products were selected based on earlier survey and responses obtained from them. This is purely quantitative study based on deductive approach. Thus, in order to conduct this research surveys were considered as the important medium, so that proper data gets collected.

FINDINGS

Outcome of this quantitative research is different types of strategies used by Asian grocery stores and their effect on customers, an impact of these strategies on their monthly budget. Secondly the price difference in each store on weekly basis, that is price variation due to various strategies used by grocery stores and its effect on customer segment.

KEYWORDS

EDLP, Anchor pricing, psychological pricing, label exclusive pricing, customer segment, Shopping behavior.

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Contents

ABSTRACT	I
Declaration.....	II
Submission of Thesis and Dissertation	3
Acknowledgment	4
Chapter 1. Introduction.....	10
1.1 Background	10
1.2 Document Structure.....	10
Chapter 2. Literature Review.....	12
2.1 Pricing Strategy	12
2.2 Types of Pricing strategy.....	13
2.2.1 Cost-based pricing.....	13
2.2.2 Psychological Pricing strategy	13
2.2.3 Anchor based Pricing Strategy	14
2.2.4 Loss leader pricing	15
2.2.5 Premium Pricing strategy	15
2.2.6 Bundle Pricing.....	15
2.2.7 Basket based pricing strategy	16
2.3 Price quality relationship-based strategies	16
2.3.1 Randomized Pricing	16
2.3.2 Sporadic Pricing changes	16
2.4 Pricing strategy at the grocery level.....	16
2.4.1 Labeled Exclusive Pricing.....	17
2.4.2 Moderately Promotional strategy	19
2.4.3 Hi-Lo Pricing strategy	19
2.4.4 EDLP (Everyday Low Pricing)	19
2.4.5 Aggressive Pricing	22
2.5 Impact of pricing on customer segment with increasing demands for product.....	22
2.5.1 Customer Segmentation	23
2.5.2 Consumer Demand for Products	24
2.5.3 Consumer Behavior.....	25
2.6 Summary	26
Chapter 3. Scope of research, Research Aim, Research Question.....	27
3.1 Scope and Research Aim.....	27
3.2 Research Question.....	27
Chapter 4 Methodology	29

4.1 Introduction	29
4.2 Research Philosophy	29
4.3 Sampling and Sampling Method	31
4.4 Population.....	31
4.4.1 Demographics Information.....	31
4.5 Data Instrumentation	33
4.5.1 Participants	33
4.5.2 Research Data collection Method.....	33
4.6 Pilot study.....	34
4.7 Data analysis	34
4.8 Ethical Consideration	35
Chapter 5. Findings.....	36
Chapter 6. Calculations & Results.....	39
Chapter 7. Discussion.....	52
7.1 Analysis of survey on buying behavior of customers	52
7.2 Pricing Strategies applied in Asian grocery stores	53
7.3 Grocery shopping and savings	55
Chapter 8. Conclusion.....	57
Chapter 9. Future Scope	58
References	59

List of figures

FIGURE 1: PSYCHOLOGICAL PRICING STRATEGY (HTTPS://WWW.ASIAMARKET.IE/SPICES-AND-DRIED-FOOD-PRODUCTS/SPICE/CARDAMOM.HTML)	14
FIGURE 2: ANCHOR BASED STRATEGY (HTTPS://WWW.ASIAMARKET.IE/SPICES-AND-DRIED-FOOD-PRODUCTS/SPICE/CARDAMOM.HTML)	14
FIGURE 3. NASH EQUILIBRIUM EDLP/PROMO.....	20
FIGURE 4NASH EQUILIBRIUM ANALYSIS.....	21
FIGURE 5 RESEARCH ONION BY SAUNDERS 2015(SAUNDERS ET AL., 2015).....	30
FIGURE 6 ANNUAL GROWTH RATE OF ASIANS IN IRELAND (CENTRAL STATISTICS OFFICE, 2012).....	32
FIGURE 7DEMOGRAPHIC INFORMATION OF ASIANS IN IRELAND (CENTRAL STATISTICS OFFICE, 2012)	32
FIGURE 8 PIE CHART SURVEY OF NUMBER OF CUSTOMERS SHOPPING IN ASIAN GROCERY STORES IN DUBLIN	36
FIGURE 9 PIE CHART FOR SURVEY PRICE DIFFERENCE IN ASIAN STORES.....	36
FIGURE 10 PIE CHART OF SURVEY CUSTOMERS PREFERRING VARIOUS SHOPPING TYPES	36
FIGURE 11 PIE CHART FOR CATEGORIZATION OF PRODUCTS.....	37
FIGURE 12 PIE CHART PREFERENCE FOR LABEL PRODUCTS	37
FIGURE 13 PIE CHART SURVEY ABOUT MONTHLY BUDGET	37
FIGURE 14 PIE CHART SURVEY FOR CUSTOMERS SAVINGS.....	38
FIGURE 15 STATISTICS ABOUT ASIAN GROCERY STORES IN DUBLIN BASED ON ECONOMICAL ASPECT	38
FIGURE 16 SURVEY ABOUT SHOPPING BEHAVIOR OF CUSTOMERS OF ASIAN GROCERY STORES IN DUBLIN.....	52
FIGURE 17 JUSTIFICATION OF ANCHOR BASED PRICING STRATEGY USED IN ASIAN GROCERY STORES IN DUBLIN	53
FIGURE 18 JUSTIFICATION OF VARIOUS PRICING STRATEGIES USED BY CUSTOMERS	53
FIGURE 19 JUSTIFICATION OF LABEL PRICING STRATEGY USED IN ASIAN GROCERY STORES	54
FIGURE 20 (A) SURVEY ON PSYCHOLOGICAL PRICING STRATEGY.....	55
FIGURE 21(A) PRICING STRATEGY EFFECTS MONTHLY BUDGET	56

List of Tables

TABLE 1 ANALYSIS OF PRICE VARIATION WEEK 1.....	39
TABLE 2 ANALYSIS OF PRICE VARIATION WEEK2	40
TABLE 3 ANALYSIS OF PRICE VARIATION WEEK 3	41
TABLE 4 ANALYSIS OF PRICE VARIATION WEEK 4.....	42
TABLE 5 ANALYSIS OF PRICE VARIATION WEEK 5	43
TABLE 6 ANALYSIS OF PRICE VARIATION WEEK 6	44
TABLE 7 ANALYSIS OF PRICE VARIATION WEEK 7	45
TABLE 8 ANALYSIS OF PRICE VARIATION WEEK 8	46
TABLE 9ANALYSIS OF PRICE VARIATION WEEK 9	47
TABLE 10 ANALYSIS OF PRICE VARIATION WEEK 10.....	48
TABLE 11 FINAL RESULT OF PRICE VARIATION AND ESTIMATION OF STANDARD COST	51

List of Abbreviation

1. EDLP – Everyday low pricing
2. Promos – Promotional Strategy
3. ASDA – Associated Diaries (British supermarket chain)
4. HI-LO – high-low pricing strategy

Chapter 1. Introduction

1.1 Background

The retail industry is hugely competitive and keeps finding ways to expand its consumer base by using new ways in response to growing demographic, technology, and income. In order to find a new approach, retailers come up with different stores. These new channels are linked with marketing, promotional activities, product assortment, and price (Koschmann and Isaac, 2018). Price differences are easily noticed by any consumers, and this gives an ability to compare the prices between two products in different stores. Nowadays consumer behavior towards purchase decision is more specific and diverse, especially in grocery stores there is a wide variety of products and consumers often have to make decisions based on standard price (Hamilton and Chernev, 2013). Small retailers used various strategies to enhance their prices, and that makes consumers change their purchase decision, but still the customer segment is wide and varied, and their behavior can only be studied to some extent. Classifying their behavior, as based on their nature of purchase customers can be cost-sensitive and premium customers, both have a different perspective towards purchase decisions (Alba *et al.*, 2002).

In this paper, the clear idea about pricing strategies is placed by referring to previous piece of literature on pricing strategy. Various pricing strategies used by supermarkets, hypermarkets, conventional stores, but before all these, small grocery stores were the basic versions that used pricing strategy, but these stores were not that focused. Every store has different pricing strategy; this paper studies the different pricing strategies focusing on particular demographic customer segment (Hyland, 2019). Price variation also creates an impact on customer's buying behavior and their monthly budget. The author of this thesis was keen on finding the strategies used by Asian grocery stores and also to know the value that is responsible for variation in prices in different stores. Previous literature was reviewed to understand and form the structure of this thesis and fill the gaps in that. However, author of this dissertation was intrigued to study various pricing strategies used in Asian grocery stores in Dublin through structured questionnaire and collect the sample of prices every week to analyze the price variation that can make an impact on customer segment.

1.2 Document Structure

The first chapter gives a background regarding the price and pricing strategy and its effect on customer segment. It justifies the value behind this study and the need behind this study. The first chapter also gives an idea of the research aim. The next chapter gives an in-depth about the review of pricing strategies that are used by grocery stores, supermarkets, and small convenience stores to enhance sales; it also reviews shopping behavior of various customer segment, and purchase decisions of customers. The next chapter is the methodology that is

insight for gathering data that was required to conduct this research, and it was done by taking survey based on structured questionnaire that was made with the help of previous literature. A primary survey was conducted to gather data, and also another data was collected for price variation by using products that were in demand by customers; these products were selected from earlier survey. Then next chapter lists about findings that are obtained from the survey. Then next chapter discusses and explains the findings and how they are related and what strategies they use. Depending upon survey conducted and data collection of variation in prices we find the standard cost that varies price on weekly manner in all different stores by calculating it. Last but not least we conclude the thesis in final chapter and securing our aim of the research.

Chapter 2. Literature Review

2.1 Pricing Strategy

Improving profitability is the essential requirement to flourish any business, then it can be supermarkets or small grocery stores. In order to increase profit, one crucial determinant is the price. Price plays a vital role in making a good profit. For increasing sales, prices are put up for a shorter period, and it is a strategy to grab customers (Hill, 2013) all these are inter-dependent factors like,

- Setting up the proper prices increases the sales
- Increase in sales, more customers
- Existing customers advertise about prices and more new customers
- Increase in competition and again increase in sales

This cycle goes on, and this does not stop. Thus, these are dependent on three main factors

1. Product: Required right quality products that are in demand
2. Availability: Required products should be readily available
3. Price: The Required product should not be expensive

Thus, pricing products is a central aspect in the marketing industry (Hill, 2013). Due to increasing competition in the market, everyone is concerned to keep expectation of customers, and thus they prefer to choose various strategies to enhance their market most probably used strategies are pricing and service that are usually for customer service (Chen and Chen, 2017). In food retailing sector, price is one of the critical factors that changes everything in a market. There has been more competition based on prices in grocery retailers, where they maintain their pricing strategy by giving discounts and promotional offers to attract customers (Zielke, 2010). One of the main aspects in Europe is the usage of price image in pricing strategy that is they focus on customers perspective to set their prices, based on how cheap or expensive the product can be for the customers, so that makes a value for money. At grocery store level various types of strategy are being used to make loyal customers and to increase their sales (Aalto-Setälä, 2003). There are seven main types of strategies that are being followed by every business, and in supermarkets and small grocery stores, they are as follows.

2.2 Types of Pricing strategy



Figure 1: Seven Pricing Strategies

2.2.1 Cost-based pricing

In this type of pricing strategy, owners finalized the marginal cost and then the total cost of the product. Here in this strategy, the marginal profit gets easily balanced. Every time the profit price is being added, and then it is sold to customers. It is one of weakest strategy because it does not take into consideration customers willingness to pay for that product (Hinterhuber, 2008).

2.2.2 Psychological Pricing strategy

Psychological Pricing strategy focuses on customer way of looking at the prices. Specifically, on price numbers that the product is sold for, for example, if the product is worth €3.00 and then it has been kept in sale for € 2.99. Thus this is a strategy to grab customers by making them psychologically positive about the price of the product, like that of ending with odd numbers, it creates a positive impact on the minds of customers (Lawarncce, 2018). It has proved psychologically that odd numbers make a positive impact on minds of people and thus this is in general use in business world. The effect of this strategy on customer mind is like making a saving by one penny less, and thus, it is also profitable for the business and known as charming pricing strategy too.

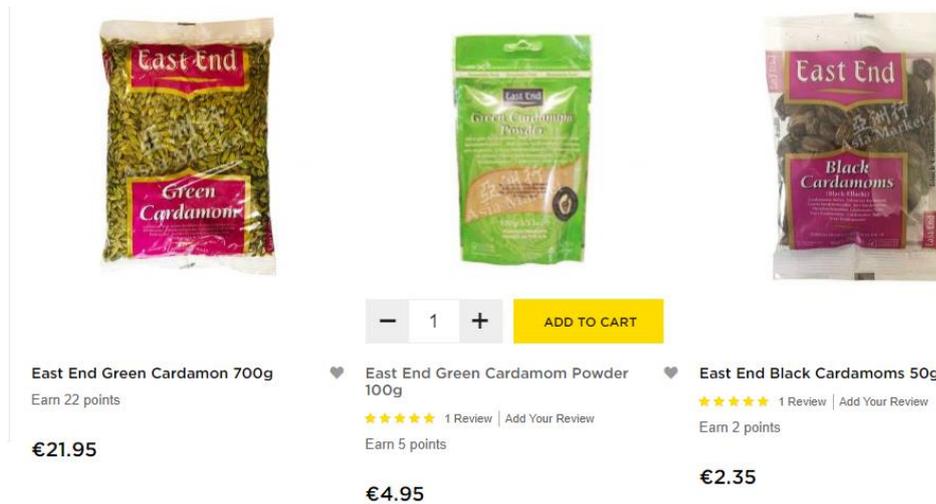


Figure 1: Psychological Pricing Strategy (<https://www.asiamarket.ie/spices-and-dried-food-products/spice/cardamom.html>)

2.2.3 Anchor based Pricing Strategy

Anchor based strategy is a new way to shrink people’s tendency to make a decision regarding product and thus to accept that in a first attempt and make a decision to purchase it (Wansink, Kent, and Hoch, 2006). This approach works better, and customers feel that they are quite intelligent in their shopping behavior, and thus business earns a profit.



Figure 2: Anchor based Strategy (<https://www.asiamarket.ie/spices-and-dried-food-products/spice/cardamom.html>)

For example, in the above picture, the price of the pickled pepper is shown as €2.85 but then canceled and put up as €2.55, but customers notice the change in first attempt and accept that the product is sold at a lower price, this creates an impact on decision of customers, and thus

they buy it (Weisstein, Kukar-Kinney and Monroe, 2016). The shop owner has an actual price set up of €2.55 or even less than that and gets a secured profit. Supermarkets and grocery stores usually use this strategy to get more customers.

2.2.4 Loss leader pricing

This strategy is used primarily for selling the supplementary products along with other products; this improves product line and helps to earn a profit (Hsieh and Dye, 2017). Loss leader strategy is useful in grocery stores or retail sector by selling one product on cost price and then thus selling multiple supplementary products of same brand along with that product (Green and Park, 1998). It has disadvantages like smart customers will only buy the product that is loss leader. (Wu, et al., 2012) Secondly, it can also spoil the brand name as it is low cost because some customers have the perception about low cost means low quality for them.

2.2.5 Premium Pricing strategy

Premium Pricing strategy deals with the self-esteem of the customers from their point of view. According to Caswell and Mojduszka, (2009) There are some premium products sold in grocery stores that have prestigious brand and hold more excellent value and thus are priced high for the quality. Customers often tend to buy these products as they ensure to have good quality, that as a high cost means a good quality too.

2.2.6 Bundle Pricing

Bundle pricing strategy is putting products into a bundle for sale. Entire price deal of product is based on a package that means buy the whole package in bundle or leave it. Bundle pricing strategy has different forms like products that are being put in various forms it can be the same or different products that are bundled together (Richards, 2004).

1. Pure Bundling

It is buying the package as whole or else leaves it, and there is no option for the consumer to take that product as a single entity.

2. Joint bundling

Joint is type in which two same or different products are packed together into a bundle to sold in offer.

3. Leader bundling

Leader bundle is two different products or supplementary products, one with leader price and other at a discounted price is being sold to customers.

4. Mixed bundling

In this, a customer can buy a single product if needed or an entire package

5. Premium bundling

Prices of the package are higher as compared to the sum of a single price of a product

Bundle pricing strategy is a most successful strategy as it is beneficial to both that is seller and buyer as well, the seller gets the absolute value, and the profit and customers can get the best deal that is time and cost-saving for customers(Wiley, Hess and Gerstner, 1991).

2.2.7 Basket based pricing strategy

Basket based strategy is the one which is somewhat like a bundle, but the primary differentiation between two of them is that in a basket that can only keep fixed prices to a specific product. It is not applied to two different products, and thus, it is often used (Hirsch, 2006). It is also a source to provide an incentive to customers. One of the best examples of it is delivery charges to set free on shopping of products.

2.3 Price quality relationship-based strategies

There are significant reasons for the price-quality relationship that is demand and need for a product, especially grocery items that are daily requirements fall into some strategies that can be unfair for customers both price and quality-wise(Bernard, Bertrandias and Elgaaied-Gambier, 2015).

2.3.1 Randomized Pricing

Randomized Pricing is a form of pricing strategy in which the seller is not just to customers based on the price at which they are selling the product and the quality they are offering. Thus, due to the need of the product customer buy that at any cost that is the flat price said for customers and thus their willingness to pay for the product is more(Wu, Li, and Xu, 2014). This strategy works where price and quality do not hold a good relation, and thus also customers are given low price and product. Still sometimes customers value and pay for that product, and thus price does not matter in front of quality(Leong, 2013). Customers pay way too high as compare to actual value of a product

2.3.2 Sporadic Pricing changes

Sometimes it becomes necessary to keep discounts and offers available for a specific period it can at any time these changes are irregular and thus are sporadic changes in prices. It also depends on various factors like inflation rate, various environmental, and due to trade rates(Leong, 2013). Due to changes in taxation, sometimes there are sporadic price changes that affect the customers. Excess demand for some product can also lead to sporadic change that can affect costumers on a large scale.

2.4 Pricing strategy at the grocery level

Small grocery stores often set their prices, but still they use various strategies to meet their monthly sell proper. Listed below are strategies used in a grocery store

2.4.1 Labeled Exclusive Pricing

Labels are considered to represent brands, environment, trust, quality. All these factors are inter-related when it comes to labeling of any products, especially in supermarkets and small grocery stores in various regions of Europe labeling has made a significant impact on consumer behavior (Bolton and Shankar, 2003). Labels are categorized as private labels, eco-labels, labels for brand marketing that comes under private labels and carbon labels that are part of eco-labels, ethical labels all these create an impact on quality of products and price of product. Private labels are becoming worldwide in many countries to upgrade their local grocery stores and supermarkets, many countries are taken steps to upgrade their marketing skills and enhance their branding by putting private labels on various products that are being sold and this is their idea behind selling more products at low price and doing assortment of products (Briesch, Chintagunta and Fox, 2009).

1. Private labels

Price is an extrinsic factor that always influences consumers, while their purchase power changes as there is a change in price. Thus it is more feasible to apply pricing strategy in order to increase profits, and one of its kind is private labels, private labels are under control of retailers and does not have any interference of manufacturers, thus it is much easier to apply this strategy as the retailers can set their prices on private brand (Uusitalo and Rökman, 2007). Private labels can have both positive as well as negative impact on consumers. The retailers set their prices there are chances that there is also difference in quality as compared to popular products, consumers do not prefer to purchase that until it has shallow value (Kumar and Steenkamp, 2007). Many consumers who shop in deals prefer this private labeled product and thus give a try to use it as the product is on deal and they are getting it at lower cost. About 18% of market is being covered in European countries by private labeling, as there are more local supermarkets and small grocery stores (Beneke, 2010).

2. Eco-labels

Eco-labels influence customers on their shopping behavior as they change their perspective about products that have eco-labels on it that are no harm to the environment. Mainly food products that utilized are represented in green color to show the eco-friendliness and thus hold a higher value (Bernard, Bertrandias and Elgaaied-Gambier, 2015). Green products are more expensive as compare to natural products and thus customers willing to pay higher for products with eco-labels as compared to other premium brands. However, price sensitivity is also one of the main factors while considering these kinds of labels, some customers that prefer to pay less and buy products and does not get easily influence by eco-labels. Secondly

considering the quality sensitive customers prefer mostly to go green and buy eco-friendly products and pay for it. Health sensitive customers also prefer green-labeled products (Testa *et al.*, 2015). Eco-labels on products eventually can replace the standard products by the consumers that have proper knowledge about eco-friendly products; this can affect the sale of natural products (Taufique, Vocino, and Polonsky, 2017). For supermarkets and retailers eco-labeled products act as up-sale for their existing products, they sell these products at higher value and also put some other products along with it to make a good profit (Testa *et al.*, 2015)

3. Carbon labeling

Carbon labeling is the label footprints to show that the grocery items purchased have less emission of carbon in them, there are three color types in this footprints label, green-yellow, and black footprints out of which green has the lower carbon emission content and black with more carbon emission content and yellow represent the moderate. Most of the grocery stores are following these footprints in order to spread the awareness regarding products that contain less carbon content thus consumers get more involve and get influence towards buying behavior for these products, customers prefer mostly products that are of green footprints rather than moving towards other two (yellow and black) (Vanclay *et al.*, 2011). Carbon footprints are not familiar to consumers. Thus, it has less impact on the buying behavior of consumers. However, at same time research done on UK supermarkets (Gadema and Ogletorpe, 2011) suggest that customers that are well aware of carbon footprints always purchase the products that have less carbon content about 81% of consumers lean towards the products that are free from carbon content in grocery stores or supermarkets.

4. Ethical labels

Ethical labels are the form in which it is considered that the products are ethically proper that it has not harmed any animal or creature for the consent, and also it has been based on fair trade (Sadler, Gilliland and Arku, 2013). Many grocery stores and supermarkets always take into consideration that the products are safe, and during its testing it has no adulteration and are not involved in harming any animal, labels like Animal welfare and fair trade is often seen on products that are being also sold in local stores and supermarkets (Grunert, Hieke and Wills, 2014). Considering the recent case of palm oil were the product is labeled as palm oil-free as there is harm for species due to deforestation caused by excessive use of palm trees for oil and other palm products and thus, also harm environment, many stores are taking the initiative on banning palm oil and putting a palm oil-free label. These labels are ethical labels

that are put on products to show the behavior behind saving the environment (Data and Trade, 2018).

All these types of labels create an impact on consumer behavior, and as the products are not adequately segregated then it becomes challenging to sell premium products, labeled products create its different mark as the consumers who have enough knowledge about such products often become loyal to these products and does not worry about quality.

2.4.2 Moderately Promotional strategy

The moderately promotional strategy applied by grocery owners at very less extent as they have to depend upon low deal support and low deal intensity. This kind of strategy is used when the number of brands is very less and mostly relying on high premium brands(Mohammed, 2018). Grocery owners do not consider this strategy first because retailers need to get detached from trade allowances. This promotional strategy comes from manufacturers in fundamental way for the advertisement of brands; thus it has less margin as compared to other strategies (Krafft and Mantrala, 2006). Some supermarkets make a card for customer shopping in that the cardholders customers get the promotional items at meager price. However, at same time customers that do not hold card have to pay a high price for the same items that are the promotional offer kept by supermarkets that help to increase their sales and also one of the strategy of retailers to grab more customers and make better sales (Bellizzi and Bristol, 2004).

2.4.3 Hi-Lo Pricing strategy

According to Cataluña, Sánchez Franco, and Villarejo Ramos,(2005) Hi-lo pricing strategy adjust the prices as per local needs and demands, but the image of prices reflects globally. This strategy is widely accepted and flexible strategy, as it allows retailers to discriminate between consumers that are being informed and misinformed(Bradlow *et al.*, 2017). For shorter period prices are set higher than it is being discounted for sale season in this strategy. Use of this strategy allows retailers to improve their margins by selling to non-price sensitive consumers at higher rates(Eber, 2015). Hi-lo pricing strategy allows the consumer to shop at their satisfactory level, as non-price sensitive consumers shop at the price they get and rest wait for discounts that will be put after some time, so this satisfies both types of customers (Volp, 2011).

2.4.4 EDLP (Everyday Low Pricing)

Everyday low pricing is one of the successful pricing strategies that keep a track to present best deals for customers, especially in small grocery stores it can be easily applied. According to Lal, R., & Rao, (1997), everyday low pricing follows perfect Nash equilibrium and thus works on it.

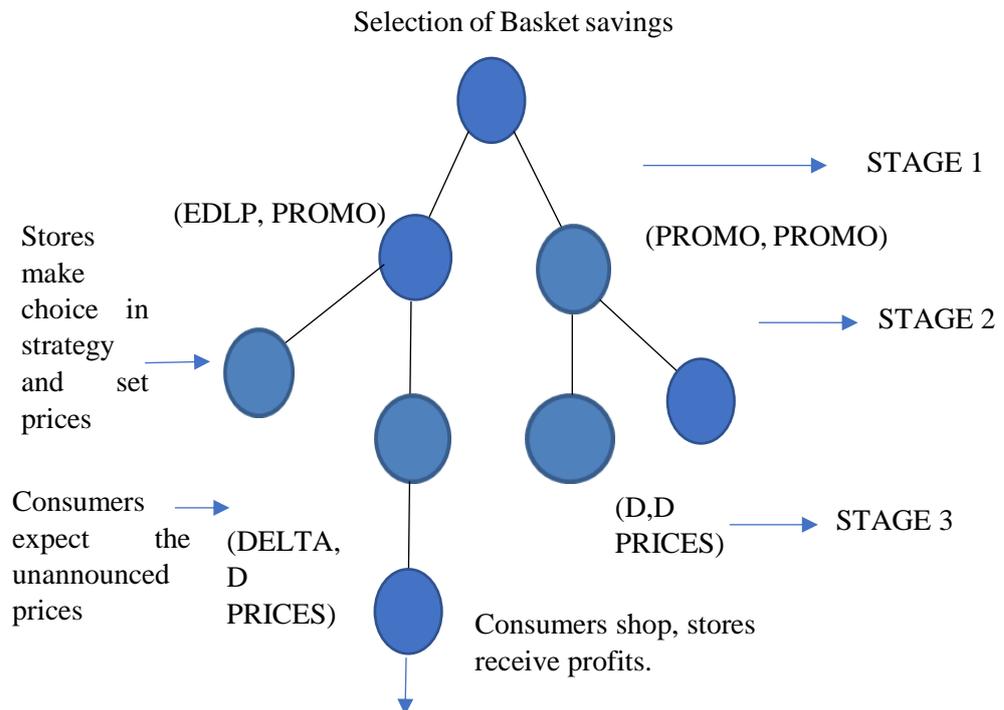


Figure 3. Nash Equilibrium EDLP/PROMO

As per Nash equilibrium theory, the store chooses to set their pricing into three stages

Stage 1: stores chose to advertise message by using deals or baskets saving code that can be put up either by implementing EDLP, PROMO, or Hi-Lo strategy.

Stage 2: Stores selects the way of communication to customers that is, suppose store 1 and store 2 for simplifying the example, if store 1 selects promo it will convey its strategy of pricing in the form of deals and promo to customers. Secondly, if the store 2 selects everyday low pricing strategy (EDLP) it talks about the savings done on basket for the customers. Now it depends on the prediction of price to be put up by the stores for deals and basket saving code, so it works on Nash equilibrium like. Here in this formulation store 1 if selects EDLP then store 2 can select promo that is the most case and similarly in case if the store 1 selects promo then store 2 can select EDLP. But here both can select promo too. There is no such case that both can claim for same lower price basket; thus, here Nash equilibrium works, and EDLP store could gain maximum profit.

	S1	S2
S1	EDLP	EDLP
S2	PROMO	PROMO
	PROMO	EDLP

Figure 4 Nash Equilibrium analysis

This formulation can lead to identical results only if it is allowed to make the sequential selection at stage 1. Apart from that main reason is the consumer behavior because consumers are not aware thoroughly about that prices that are not being advertised on exceptional products, they can only review prices based on bundles that are being put up in EDLP. EDLP stores do not give clear idea to customers about the prices that are being advertised and that have not been advertised. Thus, desirable consumer expectations could make out any difference between the equilibrium prices set by the stores and thus EDLP quickly maximize the store's profit. The main objective to maximize profit gets satisfied and thus utility, too this is based on assumptions like the marginal cost of the stores are assumed to be constant. The other main assumptions that the stores adapt the consumer's behavior that demand of one product is independent of demand of other product.

According to Tang, Bell, and Ho, (2012), mostly the consumers that do higher grocery shopping prefer EDLP. Consumers behavior is to shop more and pay less and get a customized wide variety of shopping with excellent discounts. Customers that cannot take advantage of seasonal deals that hold for shorter period, but still the customer is price sensitive prefer to use EDLP categorized stores so that they get the things at lower prices instead of waiting for seasonal deals(Kwong, 2003). From retailers' point of view, they prefer EDLP strategy because it allows continuous flow goods from manufacturer, low rates from wholesalers, related price discounts on every purchase that they can also offer on every day at low rates(Shaked and John, 1982). This EDLP also maintains long term relationship between manufacturers. By keeping prices low daily, they also make customers loyalty for their stores (Cataluña, Sánchez Franco, and Villarejo Ramos, 2005). EDLP is chosen by the stores that have vast market and are more significant enough to serve huge demographic concerns, smaller stores like grocery owners do not prefer this usually as their main focus is to sale the variety at moderately available cost and grab customers; thus they cannot keep prices low for longer-term (Ellickson and Misra, 2008).

2.4.5 Aggressive Pricing

Aggressive pricing is being used by most of the small grocery owners to represent their deals and sale weekly. Aggressive pricing is also called as sensitive pricing or Deep Pricing by the retailers as in this strategy, the prices keep on changing as per market demand every week, in order to survive in a competitive environment. About three-fourth of small stores used this kind of strategy (Bolton and Shankar, 2003).

Pricing strategies and related deals

1. Relative Price and Price variation

Relative price is set to analyze the pure brand price of particular products. Mostly in small grocery stores prices vary as per stores and thus brand differ in the prices, sometimes the same product of the same brand has two different prices in two different stores, this is because the grocery stores set price in different manner, the pure price and thus related price to it that is being for customers (Bolton and Shankar, 2003). There are variables that increase relative price, but this is only done if the prices are set a low budget. Price variation is also one of the essential factors considering the price low variation in price more brand value and more sale also. This can only be achieved if the factor for price variation is zero (Aalto-Setälä, 2003),(Shankar and Bolton, 2004).

2. The deal intensity and Deal support

The deal intensity and deal supports are basic promotional strategies of a retailer. Deal intensity includes deal depth that is how a deal is being useful for customers and also for the store; secondly, it deals with frequency and duration that is how long the deal will be featured for customers and its embarked-on sales(Bolton and Shankar, 2003). Deal support includes how the deal should be presented towards customers segment so that it takes a positive mode, display of the deal and overall decisions regarding deals, all these emphasize the promotional schemes undertaken for the goodness of stores and also customers to fetch more sales(Desai and Talukdar, 2003).

2.5 Impact of pricing on customer segment with increasing demands for product

Dynamicity of prices is prevalent everywhere, so nowadays retailers are customizing the prices at individual level to understand the purchase behavior of customers. The consumer gets promotions, offers, and discounts by the retailers to evaluate them so that they feel that they have received the best deal (David, Bearden and Haws, 2017). Shoppers do assortment of products like price deals, discounts so that customers get aware of the new price in the market(Briesch, Chintagunta and Fox, 2009). Grocery stores customers are price sensitive and always look for discounts and promotion, but the same time it is also true that grocery

store customers are also ready to pay high prices on particular products that are only found in that particular store(Huddleston *et al.*, 2009). Various customers segmentation can be done based on the different aspects of customers, which is mention in detail below.

2.5.1 Customer Segmentation

Due to diverse preferences and taste of modern customers, it becomes difficult to satisfy all customers based on their preference and price bound nature. Thus, it reflects in grocery stores where more diversity is available; thus, it is a challenge for grocery stores to understand customer segment and set their strategy as per their satisfaction. It also enables grocery stores to identify valuable customers and to retain them(Peker, Kocyigit, and Eren, 2017).

Customer segment can be classified based on various aspects such as:

- Demographical segmentation
- Geographical segmentation
- Behavior
- Psychographic

1. Demographical segmentation

Demographical segmentation is dependent on various factors such as: -

age group: customers can be targeted based on various age groups from 18 to 25 or from

25 to 45 adults and 45 to 55 old then from 65 above senior citizen groups. Depending upon age, one can highly classify the customers as different age groups possess different needs;

Ethnicity: ethnicity deals with customer segments of one social group or class so that it becomes easier to target the customers.

Nationality: considering the national residence or nationality so to focus on residency.

occupation: this deals with the segmentation of occupation like highly professional and skilled labor (Marcus, 1998)

2. Geographical segmentation

Geographical segmentation emphasizes certain areas, regions, or locations, that can be focused on to make innovation. Considering the area signifies that the people residing in that area may share the everyday needs or their interest is the same where the service or new product can be well established, as their wants and need could be different from the people living in other areas(Liu and Cui, 2013). Geographical segmentation may differ from area to area and thus can be useful to expand the business. As that of Asian residing in Dublin share the same needs and thus can be area specific to share the same customer segment that is Asians to focus on Asian grocery stores in Dublin.

3. Behavioral Segmentation

Behavior segmentation deals with the consumer's behavior, statistical analysis is being done based on the customers to check the behaviors and needs of the customers and thus taking into the consideration this data marketing trends or the services are being set up (Kotler and Armstrong, 2016).

4. Psychographic Segmentation

This segment correlates personality with brands; it is classified as the study of personality, attitudes, interest, and lifestyles. Psychographic segmentation makes organization focus on consumers and thus specifically target them based on their habitats and way of thinking towards growing lifestyles(Quinn, Hines and Bennison, 2007), increasing income has led to change in opinions of consumers and rational thinking towards retail sectors and grocery stores. Psychographic allow us to study the behavior of consumers that is what exactly they shop and why (Reddy, 2007).

Thus, considering the geographical segmentation people belonging to the region have different behavior, needs, and taste too thus considering the Asians stores set up in Dublin target specifically people that have been from Asia that include most of the crowd belonging to a student group, working people and thus tourists.

Retailing form, the primary aspect of customer segmentation as the effect of marketing emphasizes on them and thus studied the relationship between the retailer and customer is specified that has more considerable impact on society thus those of grocery stores (Krafft and Mantrala, 2006)

2.5.2 Consumer Demand for Products

In the retail industry, consumers demand goes on increasing with the change in attributes of marketing. Due to change in prices or at discount rates the demand for consumer increases that can cause the sellers to take advantage of the customers as the sale is increasing daily (Aalto-Setälä, 2003). Due to increase in demand the market prices for products and their supply also increase and supply chain also affects the economy of the store and also the consumers are effected either they are at a profit or in loss but as the demand increases chances of profit are much higher(Popkowski Leszczyc, Sinha and Sahgal, 2004). Grocery stores are increasing with the increase in customer demand, and thus consumers get a broader scope in marketing (Kent and Omar, 2003). Consumer demand for products as per segment hedges is estimated, and segment hedges prevent the type customers from paying higher prices, who are willing to pay low prices. Segment hedges are barriers for that (Smith, 2011). Demand is the basic need of market, in small grocery stores as the volume of product changes, there is a change in price, and based on this demand for that particular product increase. Consumption

patterns of consumers do not change easily, and thus, they grumble to pay high rates (Wang *et al.*, 2016).

2.5.3 Consumer Behavior

Due to change in prices, consumers often are in profit or loss, depending upon that consumer the effects are carried on. Low prices on products of grocery are often discount rates that make profitability for the consumer (Baura, 2018). Thus, in the same manner during increase in demand, there is a price rise, and thus the consumer Behavior of reliability on product and stores does not persist long (Grønhaug, Hem and Lines, 2002), this aims at competitive advantage between entry yield and customers perceptions. Consumers choose specific stores that give them better value every month. Some consumers are least interested in discounts and deals, but their main concern is regarding quality; thus they only purchase the products based on quality (Pechey and Monsivais, 2015). The daily diet of the customers had also changed, and this had also created a change in shopping patterns (Adam and Jensen, 2016). Consumers behavior is very much reliant when it comes to grocery stores, there was policy adopted, but ASDA stores were customers were greeted well when they come inside, this strategy works, but they feel good, and thus they spend more and less sensitive about price. Whereas customers that not appropriately greeted are less likely to buy and also challenge on price (Leszczyc, Sinha and Timmermans, 2000). Another shopping behavior is habitual shopping; grocery shopping mostly comes under this category of shopping. Frequently customers who shop in grocery stores shop the same products that require for their daily needs (Moore, Pinard and Yaroch, 2016). Thus grocery shopping is done once in month or week depending upon usage of customers (Tang, Bell, and Ho, 2012). Considering the customer's preference about shopping, the customers who shop on a regularly has an instinct to recall price and the has proper knowledge about the prices of the products, which they shop the most (Jensen and Grunert, 2014). They have correct perspective of price, and they keep on changing it as per specific items and deals. Promotions and marketing product by retailers and grocery owner in a different manner, that is by comparing products and showing how reliable is the product, creates an impact on customers on their buying decision (Breugelmanns and Campo, 2016). Consumers usually prefer items based on price low and high both. Cost-sensitive customers prefer products with low price and do not make any conception regarding product and quality. However, customers that are willing to pay high always had a misconception about low price means low quality and higher value means the product possess good quality and is a premium product (Kopalle *et al.*, 2009).

2.6 Summary

In summary it is evident from the earlier works of literature that various pricing strategies are used in the retail industry to improve their sales and to expand their customers base. Literature also suggests the impact of these various strategies on customers and its usefulness to them. Literature also gives the idea about customer segment and customer demand. It also emphasizes on buying behavior of customers.

All these are detailed studied earlier on supermarkets and small grocery stores in some parts of the world, but how this literature is applied to small grocery stores and based on specific customer segment and in Asian grocery stores in Dublin is studied, whereas the reasons behind variation in prices in different stores. All these questions were next forming a scope to research further on this. So, its question and scope are explained in a further chapter.

Chapter 3. Scope of research, Research Aim, Research Question.

3.1 Scope and Research Aim

Retail sectors are one of the essential aspects of a market that has enormous impact on prices. Prices on every product they sell keep on changing according to needs and demand of customers. They vary their product prices based on different strategies, thus taking into consideration the main aim of the study is to examine the strategies they use to increase their sales and also to maintain them as per customer(Chen and Iyer, 2002).

Pricing: lowering or raising prices;

customer segmentation: specified customers so that it becomes easier to focus more on sales;

consumer demand: needs of customers that are demanding various products

All this has a significant impact on customers, and thus sales in grocery stores, especially where the consumers demand various products goes on increasing. Pricing strategy is essential for small grocery stores thus adapting their pricing strategy to upscale their products is done by every supermarket and grocery stores, but at the same time for consumers, it becomes difficult to manage with changes in prices at every instant(Nagle and D., 2006). Thus, taking into consideration about customers segment the referral was taken from earlier research “ Price dispersion in online grocery stores: An analysis of UK supermarkets’ (Leong, 2013). Studying pricing strategies of Asian grocery stores in Dublin will give us a clear idea about the demand of Asian products and their effects on consumers so that they can easily compare the product prices for their benefits; this can also increase customer satisfaction with their weekly budget.

The structure of the research is based on the previous literature that has been studied so far. The literature on pricing strategy in various shops will be explained in detail. The research will be carried out based on the findings and surveys, based explicitly on two surveys - one with the products in Asian grocery stores and other with customer segmentation; the gathered information will be used as data to study the effects on consumer demand and market of Asian products based on prices in Dublin.

3.2 Research Question

There are two aspects of this research question - the pricing strategies of Asian stores and secondly, the effect of pricing strategies on customer segmentation while also considering consumer demands.

This research is carried out by collecting data from Asian grocery stores in Dublin and thus as grocery stores take advantage and often keep on varying prices it needs to be examined as it is essential for students and the majority of Asians living in Dublin to know the actual impact of it.

What are the pricing strategies of Asian grocery stores?

What are the aspects of consumer demands that prompt a change in product price?

What are the effects of pricing strategies on customer segmentation?

These are the questions that will be studied in this research below in the next chapter in detail.

Chapter 4 Methodology

4.1 Introduction

The primary focus of this research is to carry out quantitative research on pricing strategies of Asian grocery stores in Dublin and their effects on customer segment due to increase in demand; this confined research is mainly based on grocery stores as they can apply and mold the prices as per customer demands and need. This study is based on the paper “ Price dispersion in online grocery stores: An analysis of UK supermarkets’ (Leong, 2013). This above paper acts as primary reference; the following research is confined only to Asian grocery stores in Dublin. The prime goal is to study the pricing strategy that is being used by the grocery stores and their effect on the customers. The other objective is to find the price value that affects the cost of monthly budget as per customer demand and also that could be feasible for customer segment for their monthly budget shopping(Lee and Staelin, 2008). As the literature suggests the prior research on supermarkets but not more on grocery stores, so taking into account that the focus area narrows down to Asian stores in Dublin. Moreover, there are many grocery stores in Dublin, specifically Asian stores, that import products from Asian countries thus can also affect the trade-in Ireland(Market, 2019). Studying about the prices that are dynamic every month can also be due to trade, thus studying it can also give us an idea about the effects of trade on prices(Devane, 2019). In order to study and analyze this central research question is drafted further.

4.2 Research Philosophy

(Saunders *et al.*, 2015) Define the research as gaining knowledge of a topic and drawing a conclusion out of it. Outer most of the onion defines the research philosophy. Research is how the world looks at the knowledge and acquire it. There are four aspects of research

1. Positivism
2. Realism
3. Interpretivism
4. Pragmatism

Positivism: Positivism can be defined as the scientific method to study physical reality. In this philosophical approach, knowledge can be accepted if it can be measured in a controlled environment. It is based on quantitative research.

Realism: Realism is mostly used to study social issues that advocates positivism, and thus, both quantitative and qualitative methods can be used in it.

Pragmatism: Pragmatism is the philosophical approach which is more focused on reality-based on practical experiences.

Interpretivism: Interpretivism is the subjective approach that collects the data in an unstructured manner. This approach is based on a qualitative method that is being carried out using interviews, observation, and existing data.

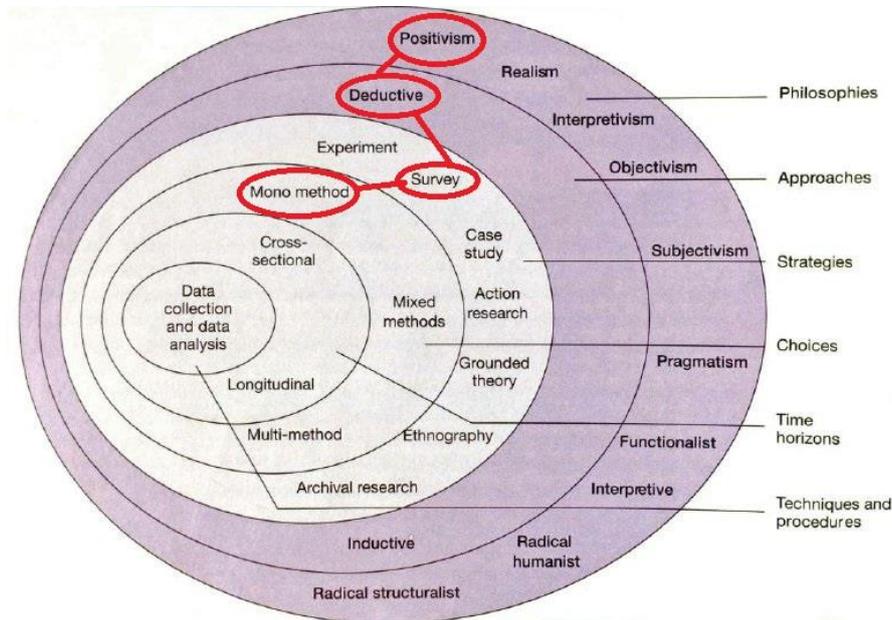


Figure 5 Research Onion by Saunders 2015(Saunders et al., 2015)

The research is based on the pricing strategy of Asian stores and thus effect on customer segmentation, so the study is carried out by collecting data from various Asian grocery stores. Also, a survey conducted from the customer for products, so the data collection is through surveys can be utilized for further analysis.

Moreover, this is more precise towards quantitative approach; collected data composed of day to day shopping of customer. It is a realist approach that is being advocated by Positivism. Data is collected through surveys by investigating the prices(Bryman & Bell, 2015).

As per Quinlan (2015), the only reality exists that has a positive effect and can find it approaching correctly.

There are two ways the study can be carried out that is

1. Induction: (Data to Theory) In this type of approach is a new theory is being made based on real-life analysis of data, and thus it is the most qualitative method.
2. Deduction: (Theory to Data) In this type of approach, an existing theory is used to gather data and study the changes as per the needs. Mostly this approach is quantitative and thus uses sampling or measure to justify research

In this study is based on the existing theory that is “ Price dispersion in online grocery stores: An analysis of UK supermarkets’ (Leong, 2013). Taking base as this existing theory, analysis of this research rely on the Pricing strategy of Asian grocery stores that are studied. Data is gathered based on surveys and thus is measurable. Thus, approach of this study is deductive and follows the quantitative method.

As per research onion, this research is Mono method based on a survey that is more deductive in nature and quantitative in nature.

4.3 Sampling and Sampling Method

Sampling is gathering data based on precise judgment regarding research. Samples are the source population that helps to make a proper judgment regarding data for research which forms base for further analysis(Bryman & Bell, 2015). Samples are non- probability-based thus are collected, and their judgment is taken into consideration, in order to proceed with the research. Based on this sampling theory this research is carried out in the form of surveys. The research carried out is purposive and thus has

The survey is conducted in order to know the variation in prices by collecting responses from customers that shop in Asian grocery stores. Samples are being collected from grocery stores by reviewing their prices weekly.

4.4 Population

The(Hyland, 2019) paper that was referred in order to carry out the research was “ Price dispersion in online grocery stores: An analysis of UK supermarkets’ (Leong, 2013). In that weekly data is being collected of prices and products to show the variation in those and study the relationship in them, but that was carried out in UK supermarkets. This study deals with Asian grocery stores; the key reason behind to select specifically grocery stores is the ratio of immigrants and other Asian population in Dublin. There is a significant increase in Asian population since last few years (Hyland, 2019), thus apart from local stores and supermarkets, Asian grocery stores can be found out on every street.

4.4.1 Demographics Information

The population of Ireland grow every year by 0.8% out of which only 0.2% is the core population of Ireland; remaining growth is due to different ethnic groups. African, Asian, Brazilians, and many more ethnic groups reside in Ireland for various purposes. As per data collected from (Central Statistics Office, 2012) increasing Asian population can be listed as per 2016 census board, it is graphically shown below

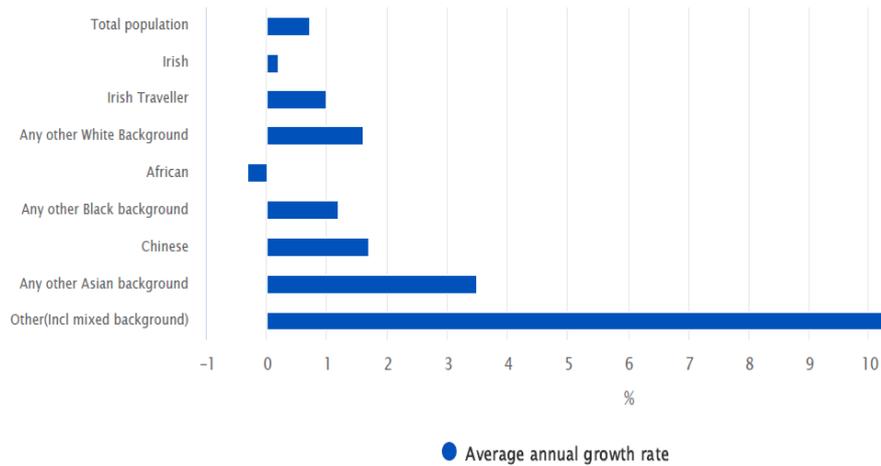


Figure 6 Annual growth rate of Asians in Ireland (Central Statistics Office, 2012)

From the graph, it is clear that about total annual growth rate there is an increase in number of Asian background and also Chinese background that both comprise from Asian population. Out of total population about 0.8 % increase annually, 0.2% is Irish and rest 0.6% others out of which 0.4% is only Asian population. Since there is rise in population some are residents here that too comprise in Asian Irish population. This increase is not only based on particular age group it has varied group from different age group and sex.

The graph below shows the Asian population and their increase by age groups.

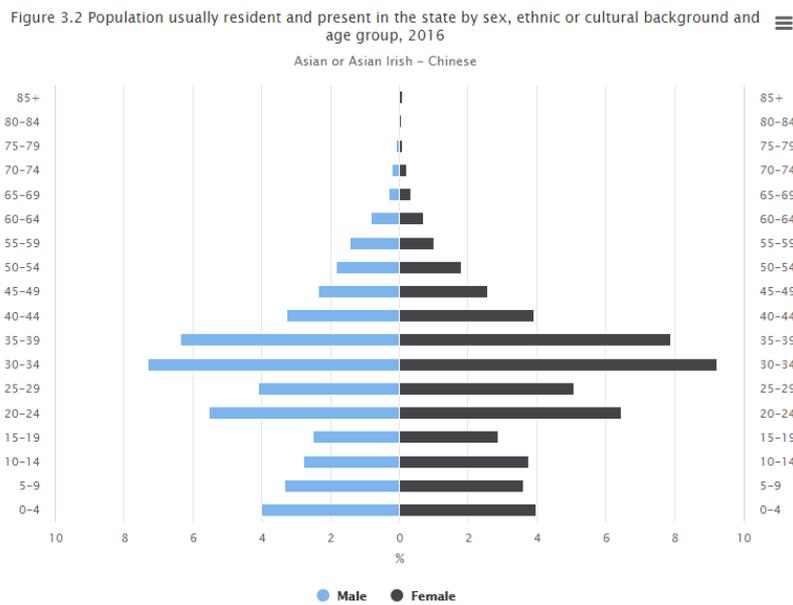


Figure 7 Demographic information of Asians in Ireland (Central Statistics Office, 2012)

From the graph, it is known that most of the age group is between 20 to 50 of age. This age group comprises of students, professionals, business groups, and family holders (Hyland,

2019). This customers segment can be focused and can be utilized and thus to analyze the research. Depending on these demographics, selection of Asian stores, specifically customers segment based on these criteria, was considered for this research.

Research segment also justifies that Asian grocery stores offer deals, and these are used by most of the customers. Secondly, it also justified the customer behavior that they focus on deals and variation in prices that help them to set their monthly budget.

4.5 Data Instrumentation

The sample was the customers that shop in Asian grocery stores. These were the approach through survey by using google form, and about 103 customers responded on that survey. The approached survey had questions that were necessary for the further collection of data. The response gave the actual picture of which products are in demand by customers. It also specified what kind of strategy do grocery stores used for customers in order to increase sales and customers loyalty.

4.5.1 Participants

Initially, sampling was collected based on the survey, that has 12 questions in total. Primary participants were the customers that shop in Asian grocery stores in Dublin. Most of the participants were Asian students that do shopping every week, and few were professionals and immigrants that reside in Dublin and shop in Asian grocery stores. About 103 samples collected by using survey, participants actively participated in answering the question genuinely so that, appropriate data can be collected.

4.5.2 Research Data collection Method

In order to gather data two types of the method was used

1. Primary data collection method

Primary data is being collected through a survey in the form of a questionnaire and also tables for different product prices so that proper analysis can be done based on this data. Data was collected utilizing a structured questionnaire consisting of 12 questions overall. Out of 12 questions, 4 were drawn from previous research “ Price dispersion in online grocery stores: An analysis of UK supermarkets’ (Leong, 2013). Remaining 5 were derived from previous literature (Wansink, Kent, and Hoch, 2006), (Grunert, Hieke and Wills, 2014). Remaining 3 were questions asking about demographic details were also included.

2. Secondary data

Secondary data is the earlier literature that referred to utilize these pieces of literature for further analysis of research.

The link below provides access to the full data set collected for this study. A printed version is available to the examiners should that be required.

<https://docs.google.com/spreadsheets/d/1vkgZaPRjWJHeXXnF2tCzRlyfPGiPGXQ5QeQ50yuS-TQ/edit?usp=sharing>

4.6 Pilot study

A pilot study was done based on a survey that has 12 questions derived from earlier literature and also depending upon that, 5 products were finalized to collect their weekly variation in prices. These products were standard common products in all stores, and thus weekly data of price variation on these products were used as a tool for further analysis of research, to find the typical search cost that varies the price of product every week.

4.7 Data analysis

Depending upon the survey done on 103 samples, further analysis of data was being done. Collected data was used as a base to analyze, which products are to be included. Survey gave a detailed study of customers behavior regarding their purchase patterns and also the demand towards the products they need on a weekly basis.

Three Phases of analysis

1. Selection of products based on samples collected
2. Analyze the variation in prices and their pricing strategy used in stores
3. Find the cost estimation based on the above analysis

Phase 1. Selection of Products

According to the survey done using a form, 103 responses were collected as a sample for data, based on that response the products that are highly demanded by customers was considered as priority for our further research. Thus, most of the shopping response were rice, wheat flour, spices, lentils, and noodles so that products were taken as sample for studying variation in prices. These 5 products are standard in the Asian grocery stores and are included in daily diet of Asian customers. As this is primary source of diet for Asian customers, these products are in demand in Asian stores in Dublin. Therefore, price variation and demand as per customer segment, and their analysis are done based on these five products.

Phase 2. Analyze the variation in prices and their pricing strategy used in stores

About ten grocery stores were selected, and these five products prices were noted down on weekly in order to study the variation in prices. The following made analysis, how demand for products vary as per change in price

Phase 4. Find the cost estimation using the equation below

Here for 10 entries of five different products, two variables are considered

y = fixed variable with 10 entries

x = variable that changes, x = price variation

for analyzing the price variation, 10 Asian grocery stores were selected that has all these five products and also are in good demand by customers.

Here the number of entries were filled for 10 stores, and fixed entry is considered as keeping variable y independent. For y as an independent variable, there is fixed cost that is almost same as of that for five different products.

Also, the elasticity of demand can be measured by using this in order to find the estimated small fixed cost we consider these tables as price variation of weeks to get possible precise data.

In order to calculate we apply simple geometric progression and find the fixed term cost that is measured with the help of equation

$$y_n = y_1 \times r^{(n-1)}$$

4.8 Ethical Consideration

The research purpose was explained to all participants before the completion of the questionnaire. All participants had the right to withdraw at any point, and by agreeing to participate in the study provided their consent. All data is anonymous, and all participants were assured of this.

The data is held in a password-protected file and participants were informed that it would be held until the marks for the dissertation were released and after that would be destroyed.

The selection criteria for participation in the study required that participant had to be at least 18 years of age and did not fall into any of the vulnerable categories i.e. children or individuals.

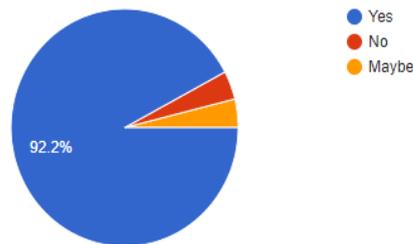
Participants were not paid for their participation, and a copy of the final report will be available to those interested in the findings.

Chapter 5. Findings

From the initial survey, we find answers to questions that were asked to customers that shop in Asian grocery stores once a week.

Do you shop in different Asian grocery stores in Dublin

103 responses

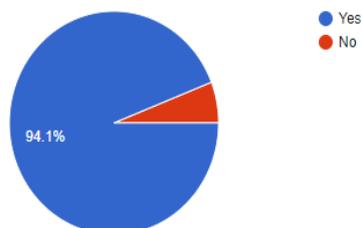


Based on survey from about 103 samples about 92.2% customers shop in Asian grocery stores in Dublin.

Figure 8 Pie chart survey of the number of customers shopping in Asian grocery stores in Dublin

Have you experience any price difference between different Asian grocery stores

101 responses

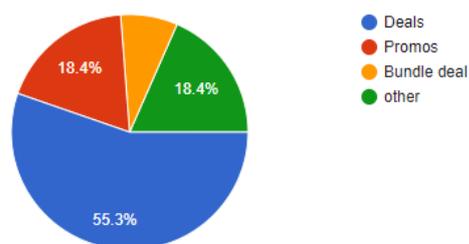


About 94.1% from 103 shop in different Asian grocery stores in Dublin.

Figure 9 Pie chart for the survey price difference in Asian stores

what kind of shopping you prefer

103 responses



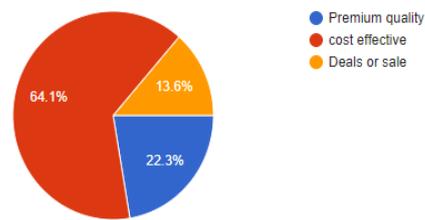
From the survey it was clear that customers mostly shop in deals

Deals – 55.3% customers, Promos – 18.4% and other sale 18.4% and rest remaining in bundle deals.

Figure 10 Pie chart of survey customers preferring various shopping types

How do you categorize products for shopping

103 responses

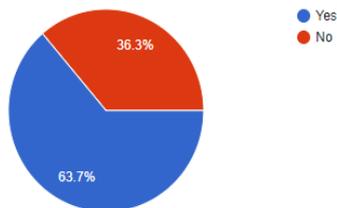


Customers often shop on basis of categories depending upon quality and cost

Figure 11 Pie chart for categorization of products

Do you prefer labelled products

102 responses

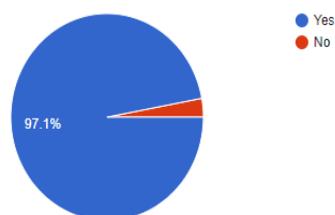


Customers were given picture of label product and were asked about their opinion regarding their usage that thus conducted survey shows about 63.7% of customers prefer products with label only.

Figure 12 Pie chart preference for label products

Do you consider grocery shopping as an important part of your monthly budget

103 responses



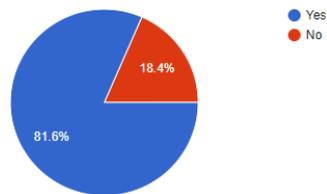
Survey shows about 97.1% of customers agree that shopping is an important part of monthly budget.

Figure 13 Pie chart survey about monthly budget

From overall survey, samples were collected to find not only the pricing strategies used in Asian grocery stores but also to find which products are in demand, thus about all samples five standard products were listed in their shopping behavior that is rice, noodles, lentils, wheat flour, and spices. These are essential products used by Asians customers regularly and are in demand.

Do various Pricing and deals on products in grocery stores helps to do saving in grocery shopping

103 responses



When customers were asked about positive effects of pricing used in form of deals and promos about 81.6% agreed that it helps in savings.

Figure 14 Pie chart survey for customers savings

At last, the customers were asked how economical are Asian grocery stores in Dublin and responses varied as per scale from do not agree to strongly agreed pointer manner

About 34 people that is about 33% neutral that Asian grocery stores are economical rest 18.4% strongly

Do you find Asian grocery stores in Dublin economical?

103 responses

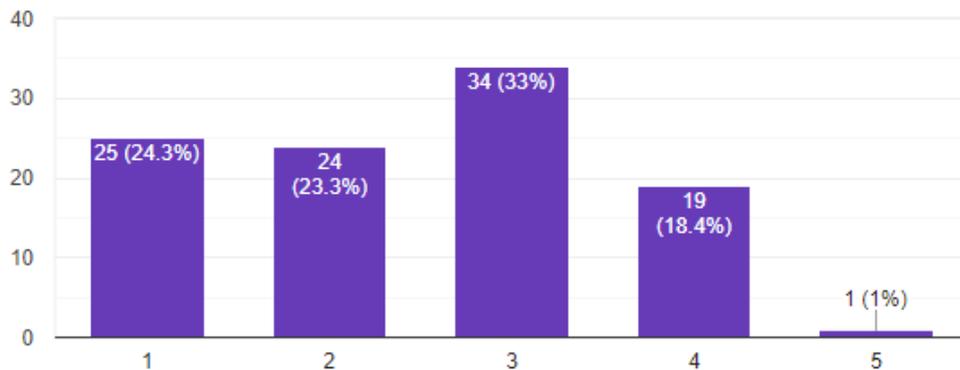


Figure 15 Statistics about Asian grocery stores in Dublin based on the economic aspect

Agree and remaining 23.3% do not agree that the Asian grocery stores are economical. Only about 1% agree strongly on it.

Chapter 6. Calculations & Results

In order to calculate we apply simple geometric progression and find the fixed term cost that is measured with the help of equation

$$y_n = y_1 \times r^{(n-1)}$$

Where a_n , a_1 are considered as variables of last and the first term, respectively. Here, r is the common ratio estimated price in between first and last term that is required to be calculated. In order to analyze and calculate the price, taking into consideration this equation is applied within the same context with few assumptions like, same marginal cost is considered for every store, products are selected based on demand, so that it becomes easier to find the cost that is within every value of product and can be predicted.

The names of the stores are available to the examiners, as would be required them; however, they have not been presented in the main body of the work to protect their identity.

WEEK 1

All the prices are in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	10.95	3.25	3.95	5.95	3.15
STORE 2	11	2.35	3.99	5.25	3.2
STORE 3	12.45	2.1	4.56	5.9	3.3
STORE 4	12.5	3.25	4.95	5.99	3.3
STORE 5	11.5	2.25	4.55	5.95	3.2
STORE 6	12.45	3.45	5.66	5.6	3.21
STORE 7	13.56	1.25	5.3	4.95	4.2
STORE 8	12.95	2.55	4.45	4.99	3.52
STORE 9	11.45	2.45	4.95	5.9	3.3
STORE 10	11.3	2.45	4.95	5.95	3.5
AVERAGE	12.01	2.54	4.73	5.64	3.39

Table 1 Analysis of price variation week 1

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price every week.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 12.01$, $x_2 = 2.54$, $x_3 = 4.73$, $x_4 = 5.64$, $x_5 = 3.39$

WEEK 2

All the prices are in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	9.56	3.25	3.45	4.99	3
STORE 2	10.5	2.4	3.2	5.25	3.2
STORE 3	12.45	2.1	3.95	5.3	3.3
STORE 4	11.25	3.25	2.99	4.95	3.25
STORE 5	11.5	2.25	3.45	5.45	3.2
STORE 6	11.3	3.2	4.15	4.65	3.21
STORE 7	12.95	1.25	5.3	4.99	4.2
STORE 8	13.56	2.55	4.45	4.95	3.52
STORE 9	12.4	2.45	4.3	5.99	3.25
STORE 10	13.95	2.55	3.99	5.35	3.39
AVERAGE	11.942	2.525	3.923	5.187	3.352

Table 2 Analysis of price variation week2

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price every week.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 11.942$, $x_2 = 2.525$, $x_3 = 3.923$, $x_4 = 5.187$, $x_5 = 3.352$

WEEK 3

All the price are in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	13.95	2.1	4.25	5.95	3.2
STORE 2	10.95	3.25	3.95	5.6	3.15
STORE 3	11.15	2.35	3.99	5.9	3.25
STORE 4	12.45	2.1	4.56	4.6	3.3
STORE 5	12.5	3.25	4.95	5.95	3.25
STORE 6	11.5	2.25	4.55	5.6	3.2
STORE 7	10.45	3.3	5.66	4.99	3.2
STORE 8	13.56	1.25	5.3	4.65	4.2
STORE 9	12.95	2.55	4.45	5.35	3.52
STORE 10	11.45	2.3	4.3	5.95	3.25
AVERAGE	12.091	2.47	4.596	5.454	3.352

Table 3 Analysis of Price variation week 3

Average of all prices of five products were taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price every week.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 12.091$, $x_2 = 2.47$, $x_3 = 4.596$, $x_4 = 5.454$, $x_5 = 3.352$

WEEK 4

All the price is in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	11.15	3.25	3.95	5.35	3.2
STORE 2	11.2	2.35	3.25	5.45	3.2
STORE 3	12.45	2.1	4.55	5.99	3.3
STORE 4	12.5	3.3	4.95	5.99	3.3
STORE 5	11.5	2.25	4.25	5.95	3.99
STORE 6	12.3	3.45	5.25	5.6	3.21
STORE 7	13.56	1.25	4.99	4.95	4.2
STORE 8	12.95	2.55	4.45	5.3	3.5
STORE 9	11.45	2.3	4.95	5.9	3.25
STORE 10	13.25	2.45	4.25	5.95	3.3
AVERAGE	12.231	2.525	4.484	5.643	3.445

Table 4 Analysis of price variation week 4

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price on a weekly basis.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 12.231$, $x_2 = 2.525$, $x_3 = 4.484$, $x_4 = 5.643$, $x_5 = 3.445$

WEEK 5

All the price are in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	10.99	3.25	3.95	5.95	3.25
STORE 2	11.2	2.5	4.55	5.25	3.3
STORE 3	10.65	2.35	4.56	5.9	3.45
STORE 4	11.95	3.3	4.95	5.99	3.7
STORE 5	11.5	2.5	4.55	5.95	3.99
STORE 6	12.3	3.45	4.95	5.6	2.99
STORE 7	11.95	2.65	5.25	4.95	3.45
STORE 8	10.65	2.55	4.45	4.99	3.5
STORE 9	11.45	2.99	4.99	5.9	3.25
STORE 10	11.55	2.45	4.25	5.95	3.99
AVERAGE	11.419	2.799	4.645	5.643	3.487

Table 5 Analysis of Price variation Week 5

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price weekly.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 11.419$, $x_2 = 2.799$, $x_3 = 4.645$, $x_4 = 5.643$, $x_5 = 3.487$

WEEK 6

All the price is in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	10.99	3.25	3.95	5.99	3.99
STORE 2	11.35	2.55	3.25	5.65	3.25
STORE 3	12.45	2.1	4.56	5.9	3.63
STORE 4	12.5	3.65	4.95	5.99	3.45
STORE 5	10.99	2.99	4.55	5.65	3.99
STORE 6	12.3	3.45	5.3	5.6	3.36
STORE 7	11.56	2.99	5.25	4.99	3.6
STORE 8	11.3	2.55	4.45	4.95	3.45
STORE 9	11.45	2.99	4.3	4.95	3.25
STORE 10	11.99	2.45	4.25	5.95	3.99
AVERAGE	11.688	2.897	4.481	5.562	3.596

Table 6 Analysis of Price variation Week 6

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price on a weekly basis.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 11.688$, $x_2 = 2.897$, $x_3 = 4.481$, $x_4 = 5.562$, $x_5 = 3.596$

WEEK 7

All the price is in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	10.99	3.5	4.25	5.95	3.2
STORE 2	11.2	2.35	3.99	5.3	3.65
STORE 3	12.45	2.25	4.56	4.99	3.95
STORE 4	12.5	3.45	4.95	5.65	3.3
STORE 5	11.5	2.99	4.55	5.95	3.99
STORE 6	12.3	3.45	4.95	5.6	3.1
STORE 7	13.56	2.65	5.25	4.99	4.2
STORE 8	12.95	2.55	4.45	4.95	3.5
STORE 9	11.45	2.3	4.99	5.45	3.25
STORE 10	13.25	2.45	4.25	5.85	3.3
AVERAGE	12.215	2.794	4.619	5.468	3.544

Table 7 Analysis of Price variation week 7

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price every week.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 12.215$, $x_2 = 2.794$, $x_3 = 4.619$, $x_4 = 5.468$, $x_5 = 3.544$

WEEK 8

All the price is in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	11.55	3.5	4.99	5.99	3.4
STORE 2	10.95	2.55	4.25	5.25	3.65
STORE 3	11.99	2.99	4.3	5.95	3.95
STORE 4	11.65	3.25	4.95	5.35	3.6
STORE 5	10.99	2.99	4.55	5.65	3.99
STORE 6	11.56	3.45	4.95	5.2	3.1
STORE 7	12.25	2.95	5.25	4.99	3.95
STORE 8	12.95	2.55	4.45	4.95	3.5
STORE 9	11.45	2.65	4.95	5.45	3.99
STORE 10	11.99	2.45	4.25	5.99	3.25
AVERAGE	11.733	2.933	4.689	5.477	3.638

Table 8 Analysis of Price variation week 8

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price on a weekly basis.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 11.733$, $x_2 = 2.933$, $x_3 = 4.689$, $x_4 = 5.477$, $x_5 = 3.638$

WEEK 9

All the price is in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	11.65	2.95	3.99	4.95	3.65
STORE 2	10.95	2.55	4.25	5.65	3.99
STORE 3	10.99	2.99	4.25	5.95	3.45
STORE 4	11.65	2.65	3.95	5.35	3.6
STORE 5	10.99	2.99	4.55	5.65	3.25
STORE 6	11.45	2.99	4.95	5.2	3.5
STORE 7	11.99	2.95	3.95	4.95	3.95
STORE 8	11.65	2.45	4.45	4.95	3.5
STORE 9	11.99	2.95	4.65	4.95	3.95
STORE 10	10.95	2.99	4.25	5.99	4.2
AVERAGE	11.426	2.846	4.324	5.359	3.704

Table 9 Analysis of price variation week 9

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price every week.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 11.426$, $x_2 = 2.846$, $x_3 = 4.324$, $x_4 = 5.359$, $x_5 = 3.704$

WEEK 10

All the price is in Euro

PRODUCTS	RICE	WHEAT FLOUR	LENTILS	SPICE	NOODLES
GROCERY STORES	5KG	1KG	1KG	1KG	1KG
STORE 1	10.95	2.35	4.99	4.65	3.25
STORE 2	11.65	2.55	4.25	5.25	3.15
STORE 3	10.95	2.99	4.3	5.99	3.99
STORE 4	11.45	2.65	4.95	5.35	3.6
STORE 5	10.99	2.95	4.55	5.65	2.99
STORE 6	11.95	3.45	4.99	5.45	2.95
STORE 7	11.99	2.99	5.25	4.99	3.25
STORE 8	11.55	2.55	4.56	4.95	3.2
STORE 9	11.45	2.45	4.95	5.45	2.99
STORE 10	11.45	2.99	4.25	5.6	3.15
AVERAGE	11.438	2.24	4.704	5.333	3.252

Table 10 Analysis of price variation week 10

Average of all prices of five products are taken in order to get more precise value. This average is analyzed further in geometric progression to find the unknown standard value that varies the price every week.

Assume: Marginal cost on every product is the same for all stores and irrespective of product that varies the price.

X1 represents average cost for rice

X2 average cost for wheat flour

X3 average cost for lentils

X4 average cost for spices

X5 average cost for noodles

$x_1 = 11.438, x_2 = 2.24, x_3 = 4.704, x_4 = 5.333, x_5 = 3.252$

Considering for five products we do analysis

Product1(Rice):

$X_1 = 12.01, 11.942, 12.091, 12.231, 11.419, 11.688, 12.215, 11.733, 11.426, 11.438$

Here 10 entries as per geometric progression to find for the common ratio we have equation

$y_n = y_1 * r^{(n-1)}$ thus no of entries 10 thus $n=10, y_n = 11.438, y_1 = 12.01$ to find r we get the formula

$$y_{10} = y_1 * r^{(10-1)}$$

$$\frac{y_{10}}{y_1} = r^{1/9}$$

$$\frac{11.438}{12.01} = r^{1/9}$$

$r = 0.99$ where condition satisfies for r that $\{-1 < r < 1\}$ thus the common cost between 10 entries for price is ± 0.99 . Taking into consideration this value price for the next coming week can be estimated for rice that its value for price is within boundaries of ± 0.99 . That means value for estimated price becomes $11.438 + 0.99 = 12.48$ or $11.438 - 0.99 = 10.448$ thus its value is in between (max=12.48 & min=10.448).

Product2(wheat flour):

$X_2 = 2.54, 2.525, 2.47, 2.525, 2.799, 2.897, 2.794, 2.933, 2.846, 2.24$

Here 10 entries as per geometric progression to find for the common ratio we have equation

$y_n = y_1 * r^{(n-1)}$ thus no of entries 10 thus $n=10$, $y_n= 2.24$, $y_1=2.54$ to find r we get the formula

$$y_{10} = y_1 * r^{(10-1)}$$

$$\frac{y_{10}}{y_1} = r^{1/9}$$

$$\frac{2.24}{2.54} = r^{1/9}$$

$r = 0.986$ where condition satisfies for r that $\{-1 < r < 1\}$ thus the common cost between 10 entries for price is ± 0.98 . Taking into consideration this value price for the next coming week can be estimated for rice that its value for the price is within boundaries of ± 0.98 . That means value for estimated price becomes $2.24 + 0.98 = 3.22$ or $2.24 - 0.98 = 1.26$ thus its value is in between (max=3.22 & min=1.26).

Product3(lentils):

$$X_3 = 4.73, 3.923, 4.596, 4.484, 4.645, 4.481, 4.619, 4.689, 4.324, 4.704$$

Here 10 entries as per geometric progression to find for the common ratio we have equation

$y_n = y_1 * r^{(n-1)}$ thus no of entries 10 thus $n=10$, $y_n= 4.704$, $y_1=4.73$ to find r we get the formula

$$y_{10} = y_1 * r^{(10-1)}$$

$$\frac{y_{10}}{y_1} = r^{1/9}$$

$$\frac{4.704}{4.73} = r^{1/9}$$

$r = 0.99$ where condition satisfies for r that $\{-1 < r < 1\}$ thus the common cost between 10 entries for price is ± 0.98 . Taking into consideration this value price for the next coming week can be estimated for rice that its value for the price is within boundaries of ± 0.98 . That means value for estimated price becomes $2.704 + 0.99 = 3.694$ or $4.704 - 0.99 = 3.714$ thus its value is in between (max=3.694 & min=3.714).

Product4(Spices):

$$X_4 = 5.64, 5.187, 5.454, 5.643, 5.643, 5.562, 5.468, 5.477, 5.359, 5.333$$

Here 10 entries as per geometric progression to find for the common ratio we have equation

$y_n = y_1 * r^{(n-1)}$ thus no of entries 10 thus $n=10$, $y_n= 5.333$, $y_1=5.64$ to find r we get the formula

$$y_{10} = y_1 * r^{(10-1)}$$

$$\frac{y_{10}}{y_1} = r^{1/9}$$

$$\frac{5.33}{5.65} = r^{1/9}$$

$r = 0.943$ where condition satisfies for r that $\{-1 < r < 1\}$ thus the common cost between 10 entries for price is ± 0.943 . Taking into consideration this value price for the next coming week can be estimated for rice that its value for the price is within boundaries of ± 0.943 . That means value for estimated price becomes $5.333 + 0.943 = 6.276$ or $5.333 - 0.943 = 4.399$ thus its value is in between (max=6.276 & min=4.399).

Product5(Noodles):

$$X5 = 3.39, 3.352, 3.352, 3.445, 3.487, 3.596, 3.544, 3.683, 3.704, 3.252$$

Here 10 entries as per geometric progression to find for the common ratio we have equation

$y_n = y_1 * r^{(n-1)}$ thus no of entries 10 thus $n=10$, $y_n = 3.252$, $y_1 = 3.39$ to find r we get the formula

$$y_{10} = y_1 * r^{(10-1)}$$

$$\frac{y_{10}}{y_1} = r^{1/9}$$

$$\frac{3.252}{3.39} = r^{1/9}$$

$r = 0.959$ where condition satisfies for r that $\{-1 < r < 1\}$ thus the common cost between 10 entries for price is ± 0.959 . Taking into consideration this value price for the next coming week can be estimated for rice that its value for the price is within boundaries of ± 0.959 . That means value for estimated price becomes $3.252 + 0.959 = 4.211$ or $3.252 - 0.959 = 2.293$ thus its value is in between (max=4.211 & min=2.293).

Result: price variation based on pricing strategy as follows for five products

Products	Maximum cost	Minimum cost	Standard cost
Rice	12.48	10.448	± 0.9
Wheat flour	3.22	1.26	± 0.9
Lentils	3.694	3.714	± 0.9
Spices	6.276	4.399	± 0.9
Noodles	4.211	2.293	± 0.9

Table 11 Final Result of price variation and estimation of standard cost

Chapter 7. Discussion

7.1 Analysis of survey on buying behavior of customers

Several questions in the survey were mentioned so that to get precise data regarding the grocery stores. About 103 responses are taken 92.2% of customers shop in Asian grocery stores in Dublin further. There are different grocery stores, customers most of time prefer to shop in different grocery stores in order get discounted product and best deal and thus do saving, from about 101 responses about 94% customers shop in different stores this real data analyze the behavior of customers. Customer prefers to shop only in those shop that put basket savers or deals and promos.

what kind of shopping you prefer

103 responses

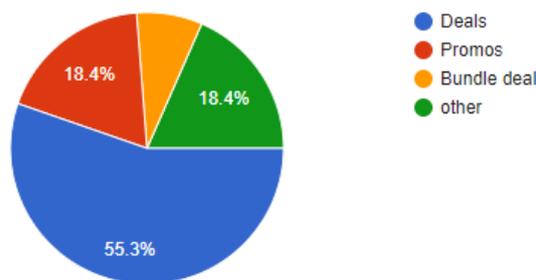


Figure 16 survey about shopping behavior of customers of Asian grocery stores in Dublin

From the above pie diagram, about 103 customers responded to shopping preference that they mostly prefer deals. Some shop does deals, bundle deals, promos, and pricing method, but most of the method prefer by the customers is deals that are EDLP track everyday low pricing (Ellickson and Misra, 2008). 55% of targeted customers always prefer low cost and often take products that are at best deals, so customers behavior to do shopping is known by this survey. Rest 18% prefer promos, and other deals and very few customers prefer choose bundle deal.

7.2 Pricing Strategies applied in Asian grocery stores

While shopping have you experience such kind of deals

103 responses

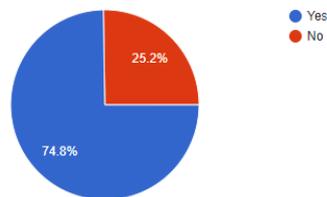


Figure 17 Justification of Anchor based pricing Strategy used in Asian grocery stores in Dublin

In Asian grocery stores Anchor based kind of pricing strategy is being used to grab customers by putting various deals'' pay what you want strategy' such kind of deals show up to customers as if they are made for customers (Weisstein, Kukar-Kinney and Monroe, 2016). Mostly shop owner's grocery stores do this on every demanding product so that they get an increase in sales. In every Asian grocery stores, they put up deals, and about 74.8% of customers do shopping based on deals that follow psychological strategy of pricing to increase sales. This strategy put customers mind into dilemma about the prices, the price as shown in above figure is being put up and then it is reflected according to customers mind. This change customers view about the price for the product, (Wansink, Kent, and Hoch, 2006) this is entirely based on human psychology to act towards the things that are beneficial and cost-effective from shopping point of view, this kind of behavior among customers is common and thus Anchor based pricing is useful in this case.

How do you categorize products for shopping

103 responses

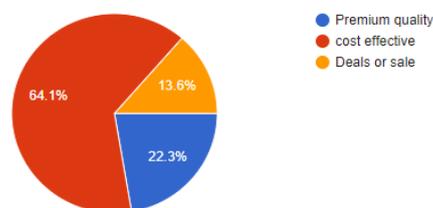


Figure 18 justification of various pricing strategies used by customers

There are various types of customers; some prefer quality premium products, while some are price-sensitive customers. Some customers only shop in deals and promos (Huddleston *et al.*,

2009) thus in grocery stores about 64.1% customers do cost-effective shopping that is they are price-sensitive customers while the rest 13.6% shop only those products that are premium and does not follow any deals (Hsieh and Dye, 2017).

Do you prefer labelled products

102 responses

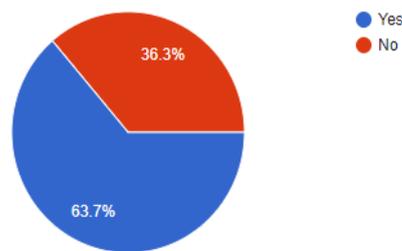


Figure 19 justification of label pricing strategy used in Asian grocery stores

Depending on customer behavior various other strategy used is labeled strategy for various products like gluten-free products, low fat, ecofriendly that are labeled as higher price without any promos or deals (Grunert, Hieke and Wills, 2014). Customers buy that at higher cost by just looking at labels and not the actual contents; these products often grab high ratings, and customers prefer to take that at any price (Beneke, 2010). All these products are put in Asian grocery stores and as per responses collected about 61% customers shop labeled products, so this strategy is proved to be useful for Asian grocery stores owners to set their prices and make customers to increase profit.

Have you noticed prices circle below in image on the products while doing your shopping

103 responses

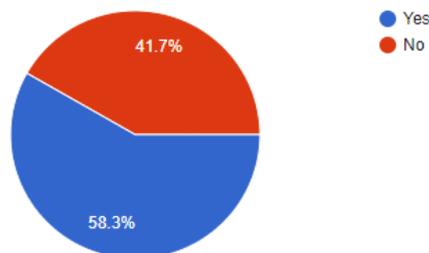


Figure 20 (a) survey on psychological pricing strategy

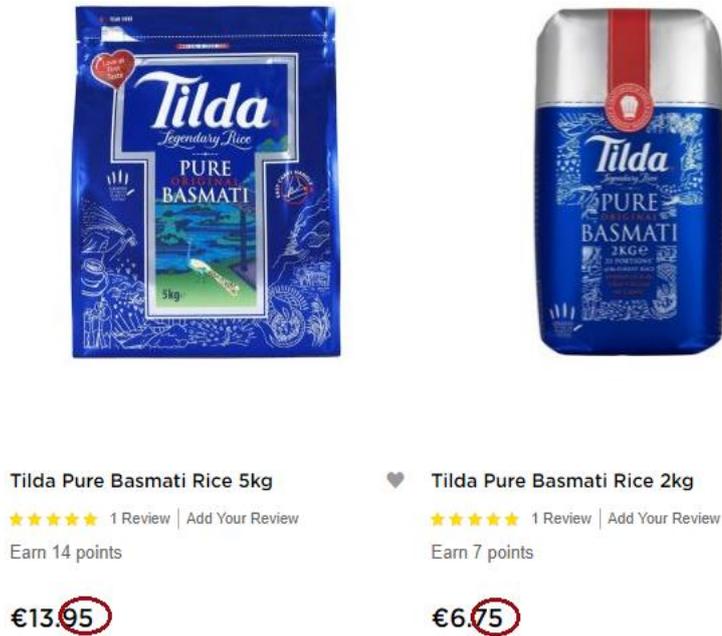


Figure 20(b) psychological pricing Strategy used in Asian grocery stores

There are various strategies used by Asian grocery stores for attracting customers and increase profits; one of its kind is psychological pricing strategy (Lawarncce, 2018); here, customer behavior is studied. Grocery stores owners put the price that is near to the same amount of product they want to sell like €2.99 for €3 product, so it reflects as the product is on deal or saver mode and human psychology to think that it is cost-effective and they land up with purchasing that product(Herrmann, Moeser and Weber, 2005). About 58% of customers responded to such kind of pricing strategy they use this kind and find cost-effective thus technique of not rounding off the last digits in prices so that it can achieve a sufficient amount by just playing with minds of customers.

7.3 Grocery shopping and savings

Do you consider grocery shopping as an important part of your monthly budget

103 responses

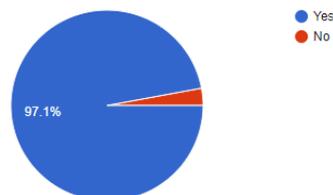


Figure 21(a) Pricing strategy effects monthly budget

Do various Pricing and deals on products in grocery stores helps to do saving in grocery shopping

103 responses

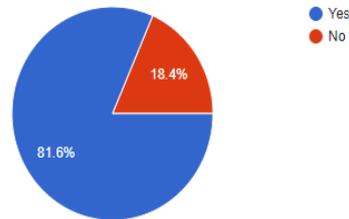


Figure 21 (b) Price variation and savings.

As per the survey did it is observed that about 97% of customers consider pricing as an essential part of their monthly budget thus it becomes helpful for them if they come up with various deals and promos. Shopping in Asian grocery stores with various pricing strategy helps them to get savers and also to consider the budget if the search cost is known for them for their next monthly budget of shopping. Customers also find Asian grocery stores economical due to variation in prices and various deals.

Graphical analysis shows that as per the survey about 25% customers do not find Asian stores economical, about 34% find it economical. It also depends upon the prices and customer segment and the products they purchase whether it is demanding or promo based or premium product

Chapter 8. Conclusion

The above-gathered data was based on surveys that were conducted with the help of samples, samples were the responses of customers and their opinion regarding the strategies they use while shopping in Asian grocery stores in Dublin and this was analyzed with the help of the literature and thus form a foundation for this thesis. Main key points that are being concluded are as follows; various pricing strategies are used by Asian grocery stores.

Anchor based pricing strategy: Customers frequently shop in deals and promos, and such kind of pricing strategies are used in Asian grocery stores where prices are canceled and new prices are put up to show discounts on them.

Psychology based pricing strategy: This pricing strategy is also used by the Asian grocery stores, where the prices are not put on rounded prices and customers think it as cost-effective and land up purchasing the products.

Labeled pricing strategy: This kind of strategies are also used by grocery stores, in these various labels are used that show eco-friendly nature, or sustainable labels and customers purchase these products, and thus stores increase their sales.

Other pricing strategies like promos and EDLP deals are also used here to improve their sales and increase customer loyalty.

Secondly, five products were selected, and an analysis was made to find the same standard cost that varies in every product price and every Asian grocery store in Dublin. It identifies that the change in price is same for all the Asian grocery stores on weekly basis and an average change in price occurs by 0.9€ in both maximum and minimum value from previous week. Thus, price can be estimated at maximum price and minimum price for every product on a weekly basis, so it becomes easier for customers to estimate their monthly budget as per this value if they want to shop more and pay less.

Thus, concluding that pricing strategy is linearly related to prices of the products because the product in demand always varies depending upon the pricing strategies used to sale them. Lastly, pricing strategies are responsible for price variation on a weekly basis and thus cost-sensitive customers do shop on deals but as the estimated value of (+ 0.9€, -0.9€) on every product can change their budget and can help them to save on their basket every week. So that customers no longer wait for deals and promos.

So, deals and promo create an impact on customers segment, even a small value can bring a big change, but if this analysis can place the proper estimation then it is being considered as one of savings and thus helpful for customers for their next shopping.

Chapter 9. Future Scope

The dissertation enabled the author to study the pricing strategies confined to specific demographic segment and focused on a specific area that is Asian stores in Dublin, and it also studied the variation in prices on weekly basis in all stores keeping marginal cost constant for all the different stores and product. As the research was only applied for precisely five products that were in demand and as these products were included by customers in their daily diet, so study was only based reasonable aspect of these products. Future study can be done with all products that are being sold in grocery stores and also selecting the broad geographic segment, including the reasons behind it. The future scope can also emphasize on elastic and inelastic nature of demand that mainly occurs in retail industry due to various pricing strategy in more elaborative way in grocery stores taking into consideration customer segment and their habitual shopping behavior towards this demand.

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